

REMARKS

Claims 3, 5, 7, and 18 are pending. By the Office Action, claim 1 is rejected under 35 U.S.C. §102, and claims 3 and 5-7 are rejected under 35 U.S.C. §103. By this Amendment, claim 3 is amended, claims 1 and 6 are canceled, and new claim 18 is added. Support for the amendments to claim 3 can be found in claim 6 as filed support for new claim 18 can be found in the specification as originally filed, such as at page 12, line 36 to page 13, line 1. No new matter is added.

Entry of this Amendment is proper under 37 C.F.R. §1.116 because the Amendment places the application in condition for allowance (for the reasons discussed herein) or places the application into better form for Appeal should an Appeal be necessary. The Amendment does not present any additional claims without canceling a corresponding number of finally rejected claims, does not raise the issue of new matter, and does not raise any new issues requiring additional search and/or consideration since the Amendment is directed to subject matter previously considered during prosecution. Furthermore, the amendments are necessary and were not earlier presented because they are in response to issues raised in the Final Rejection. Applicants respectfully request entry of the Amendment.

I. **Rejection Under §102**

Claim 1 is rejected under 35 U.S.C. §102 over Johnson.

Although Applicants do not necessarily agree with the rejection, in the interest of advancing prosecution claim 1 is canceled. Accordingly, the rejection is overcome and must be withdrawn.

Reconsideration and withdrawal of the rejection is respectfully requested.

II. **Rejections Under §103**

Claims 3 and 5 are rejected under 35 U.S.C. §103(a) over Johnson in view of *In re Larson*. Claim 6 is rejected under 35 U.S.C. §103(a) over Johnson in view of Stokes. Claim

7 is rejected under 35 U.S.C. §103(a) over Johnson in view of "well known prior art."

Because the rejections are related, they are addressed together. Applicants respectfully traverse the rejections with respect to the amended claims.

Independent claim 3 is directed to a color-correcting system comprising: an input unit that receives image data; a controller storing output-correcting value, for correcting the image data received by the input unit by using the output-correcting values; and an output unit that prints an image on the basis of the corrected image data obtained by correcting the image data by the controller, wherein: the controller has test image data including reference color development characteristic information, the input unit reads the test image printed on the basis of the test image data by the output unit, the controller calculates output-correcting values on the basis of the difference between the color development characteristic information included in the test image data read by the input unit and sent through a line from the input unit to the controller and the reference color development characteristic information sent through the same line as that of the test image data from the input unit to the controller, and the controller stores a plurality of sets of output-correcting values and selects an appropriate set of output-correcting values in accordance with printing conditions. Such a color-correcting system is not taught or suggested by the cited references.

Johnson discloses a method for making high quality reproductions, that is reproductions that correspond in finished color to the color of the original image, which method operates upon the original color densities with a color correction module that has as its input the desired red, green, and blue densities, and which outputs the modified red, green, and blue densities which can be considered to be channel-independent aim control signals for the imaging device. In the event that external conditions change which prevent the desired red, green, and blue densities from being achieved when the color correction module is utilized, a neutral adjustment module is activated which takes as its inputs the red, green, and

blue aim control signals from the color correction module and outputs adjusted red, green, and blue signals which are directed to the imaging device. The derivation of the parameters for the neutral adjustment module is accomplished by the production of a hardcopy image of neutral color patches. The densities of the patches are measured and provided to the color correction module to determine the correct relationships between red, green, and blue signals output from the color correction module and the resulting densities. Johnson at Abstract.

The Office Action asserts that Johnson discloses all of the limitations of the claimed invention, except that the input unit and the second input unit are the same, and that the controller stores a plurality of sets of output-correcting values and selects an appropriate set of output-correcting values in accordance with printing conditions. However, the Office Action argues that making separate parts integral is an obvious engineering design choice under *In re Larson*. The Office Action also argues that Stokes teaches the latter limitation, of storing a plurality of sets of output-correcting values and selecting an appropriate set of output-correcting values in accordance with printing conditions. Applicants respectfully submit that the references are improperly combined, and that even in combination the cited references would not have rendered obvious the claimed invention.

In contrast to Johnson, the claimed invention specifies, *inter alia*, at least the following four features:

- (A) the controller calculates output-correcting values on the basis of the differences between the color development characteristic information included in the test image data and the reference color development characteristic information;
- (B) the color development characteristic information is sent through a line from the input unit to the controller;
- (C) the reference color development characteristic information is sent through the same line as that of the test image data from the input unit to the controller; and

(D) the controller stores a plurality of sets of output-correcting values and selects an appropriate set of output-correcting values in accordance with printing conditions.

Johnson, and the other cited references, nowhere teaches or suggests these combined features of the claimed invention, or the advantages provided thereby.

By features (A), (B), (C), and (D), the color development characteristic information and the reference color development characteristic information are sent through the same line from the input unit to the controller. As a result, the controller can precisely calculate output-correcting values on the basis of the differences between the color development characteristic information included in the test image data and the reference color development characteristic information. This is possible because both sets of data are sent through the same line, and thus under the same conditions. If conditions in the line alter one set of data, the same conditions will alter the second set of data in the same manner. By comparing the altered (or unaltered) reference set of data to the known set of data, the controller can calculate accurate output-correcting values that can be applied to the image data and, as a result, high quality images can be obtained. Such accurate calculation is not possible where the separate data sets are sent through separate data lines, and thus can be unaltered or altered to different extents from each other.

Johnson does not teach or suggest the claimed invention, and specifically does not teach or suggest that the color development characteristic information and the reference color development characteristic information are sent through the same line from the input unit to the controller. Johnson instead teaches that the parameters for the color correction circuitry are determined on the basis of the input signal (such as R1, G1, B1) and the resulting color densities (such as Dr', Dg', Db'). However, in Johnson, the input signal is sent through a first line, from the data source 12 to the color correction unit 14, and the resulting color densities are sent through a second, different line from the scanner to the computer. Thus, in Johnson,

the input signal and resulting color densities are sent through separate, different lines, not the same line as in the claimed invention. Johnson can thus not provide the same degree of precise output-correcting value calculations, because Johnson cannot identify and account for any conditions that affect one or both of the signals sent in the separate lines.

In re Larson does not address these deficiencies of Johnson. *Larson* is cited only for the assertion that making parts integral is an obvious engineering design choice. However, the described features of the claimed invention are more than mere engineering design choice. *Larson* does not provide the necessary motivation for one of ordinary skill in the art to have used the same data line for communication the different data sets in Johnson, and does not teach or suggest how such a common data line could be used in the device of Johnson to provide the desired results. Nor does *Larson* or Johnson teach or suggest that the advantageous result -- accurate calculation of output-correcting values -- could or should be obtained by using such a single, common data line. The claimed features are nowhere taught or suggested by Johnson, and thus it would not have been obvious for one of ordinary skill in the art to have modified Johnson in the manner necessary to arrive at the claimed invention.

Moreover, Johnson and Stokes do not teach or suggest the above feature (D), that the controller stores a plurality of sets of output-correcting values and selects an appropriate set of output-correcting values in accordance with printing conditions. The Office Action asserts that this feature is taught in Stokes at cols. 4-5 and 6. Applicants disagree.

In Stokes, one or more color matching method modules (CMM) can be included. As described in Stokes, the CMM modules include static color characteristic changing conditions, such as would be used to convert computer image data to different color gamuts. See Stokes at col. 4, lines 45-54. For example, Stokes describes that one CMM unit could include color characteristic changing conditions so that image data displayed on a monitor can be accurately color reproduced for printing on a printer. See Stokes at col. 4, lines 55-67.

However, Stokes' color matching method modules are different from, and unrelated to, the claimed feature where the controller stores a plurality of sets of output-correcting values and selects an appropriate set of output-correcting values in accordance with printing conditions. The color correcting values of Stokes are static values, such as are used for converting a monitor image set of data to a printer set of data. The color correcting values of Stokes are not color correcting values, used to correct image data that may be altered by a data line. Nowhere does Johnson or Stokes teach or suggest storing any such sets of output-correcting values, and selecting from among such sets in accordance with printing conditions.

Accordingly, claim 3 and its dependent claims would not have been obvious over Johnson, even taken with the principles of *in re Larson*, Stokes, or the "well known prior art." Reconsideration and withdrawal of the rejection are respectfully requested.

III. Conclusion

In view of the above remarks, it is respectfully submitted that the above-identified patent application is in condition for allowance. Favorable consideration and prompt allowance are therefore respectfully requested.

Should the Examiner believe anything further would be necessary in order to place the application in condition for allowance, the Examiner is invited to contact Applicants' undersigned representative at the telephone number listed below.

Respectfully submitted,



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